



California Energy Commission

**2012 IEPR Workshop
Revised California Energy Demand Forecast
2012-2022**

**Efficiency/Conservation,
Self-Generation**

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Energy Efficiency

- Committed Savings
 - Implemented programs and initiatives
 - Not yet implemented but finalized, approved, and funded
- Uncommitted Savings
 - Likely to occur but not yet finalized, approved, or funded
 - Not included in the CED 2011 Revised Forecast



Committed Building and Appliance Standards

- Energy Commission forecasting models incorporate building and appliance standards through changes in inputs
- End-use consumption per household in the residential sector and end-use consumption per square foot in the commercial sector
- To measure the impact of each individual set of standards, staff removed the input effects from standards one set at a time



Committed Utility and Public Agency Efficiency Programs

- Three scenarios: high savings for low demand case, low savings for high demand case
- For IOUs (2011 and 2012 first-year savings):
 - High savings equals total net reported
 - Low savings applies realization rates by end use based on 2006-2009 CPUC EM&V results
- Logistic decay function applied to first-year savings given expected useful life
- Assumes 50% of IOU decay from 2006 on is made up through additional committed savings



Committed Utility and Public Agency Efficiency Programs

- Similar procedure for publicly owned utilities
- Committed period extends to 2011 only
- Realization rates for historical program savings informed by CPUC EM&V efforts



Price and Market Effects

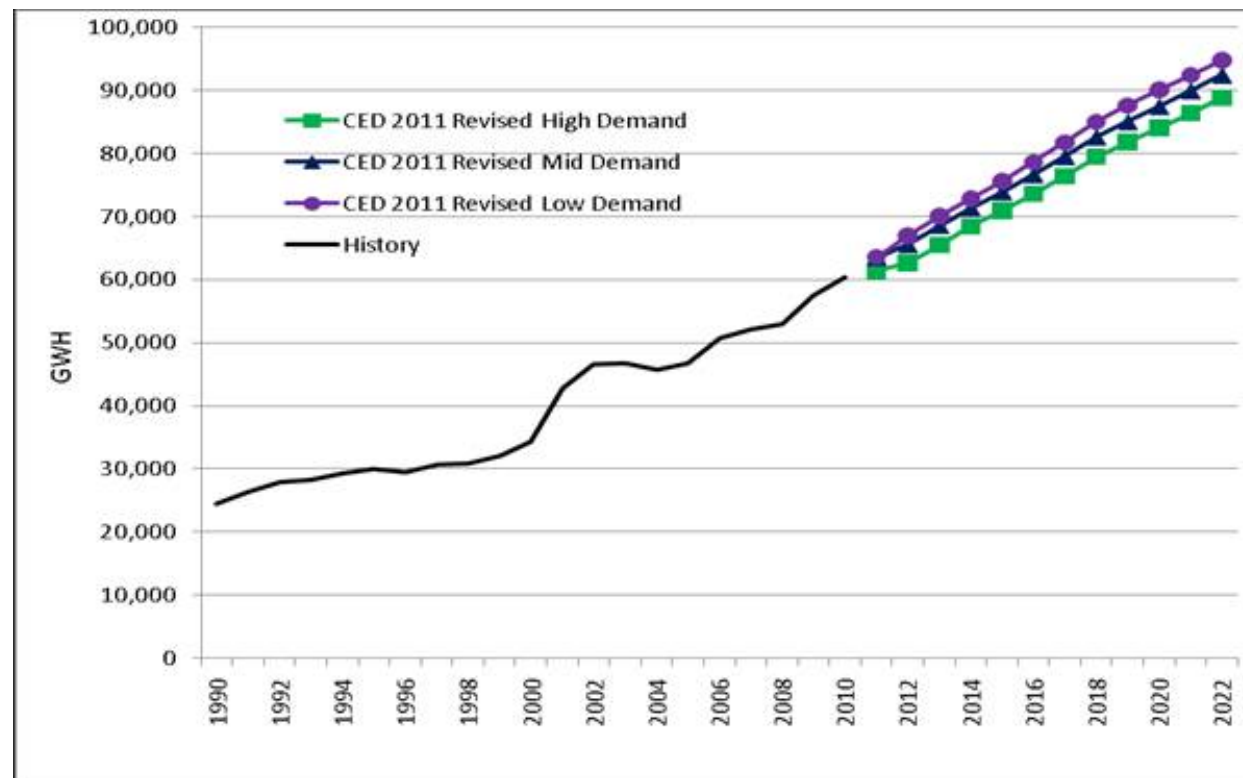
- Meant to capture load impacts of changes in energy use not directly associated with standards or efficiency programs
- In practice, mainly includes impacts of rate changes (price effects)



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Statewide Committed Consumption Savings

Nearly 92,500 GWH in mid case by 2022

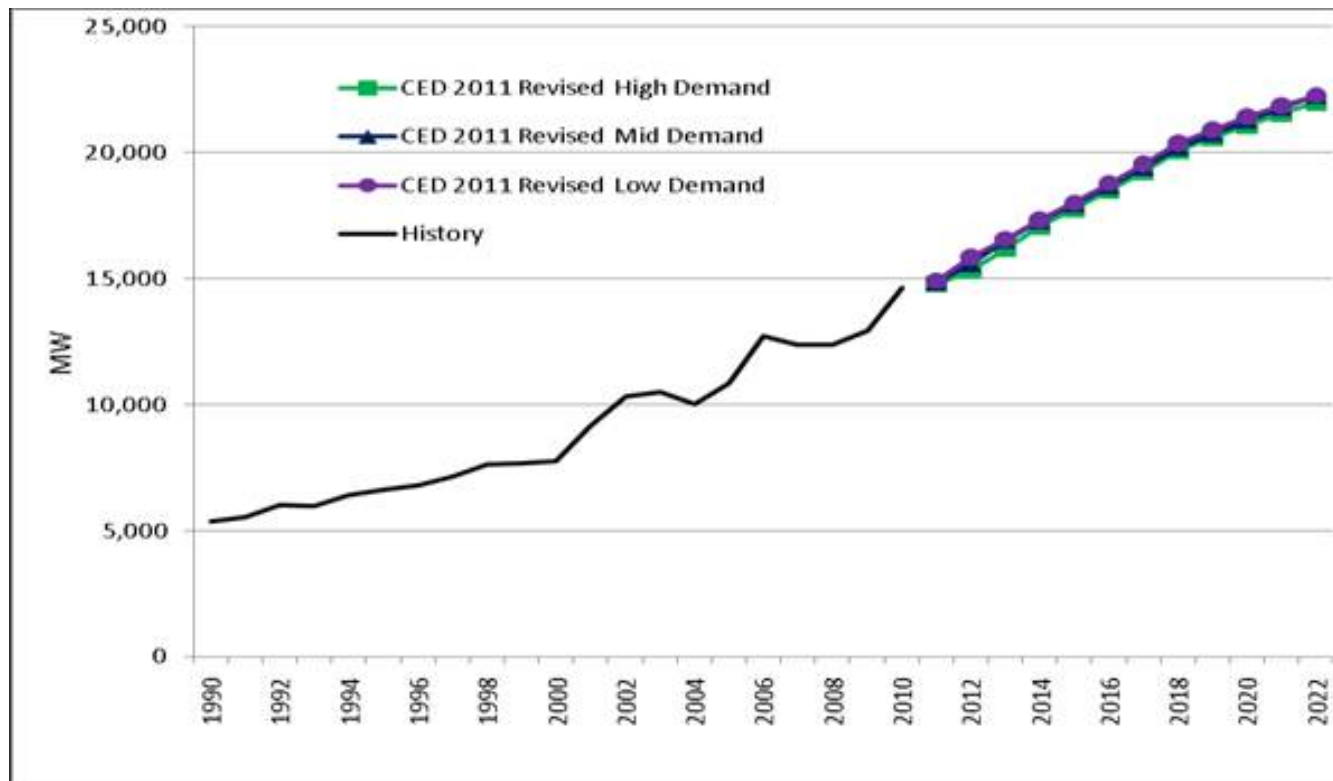




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Statewide Committed Peak Savings

All three cases above 22,000 MW by 2022





Natural Gas Program Impacts

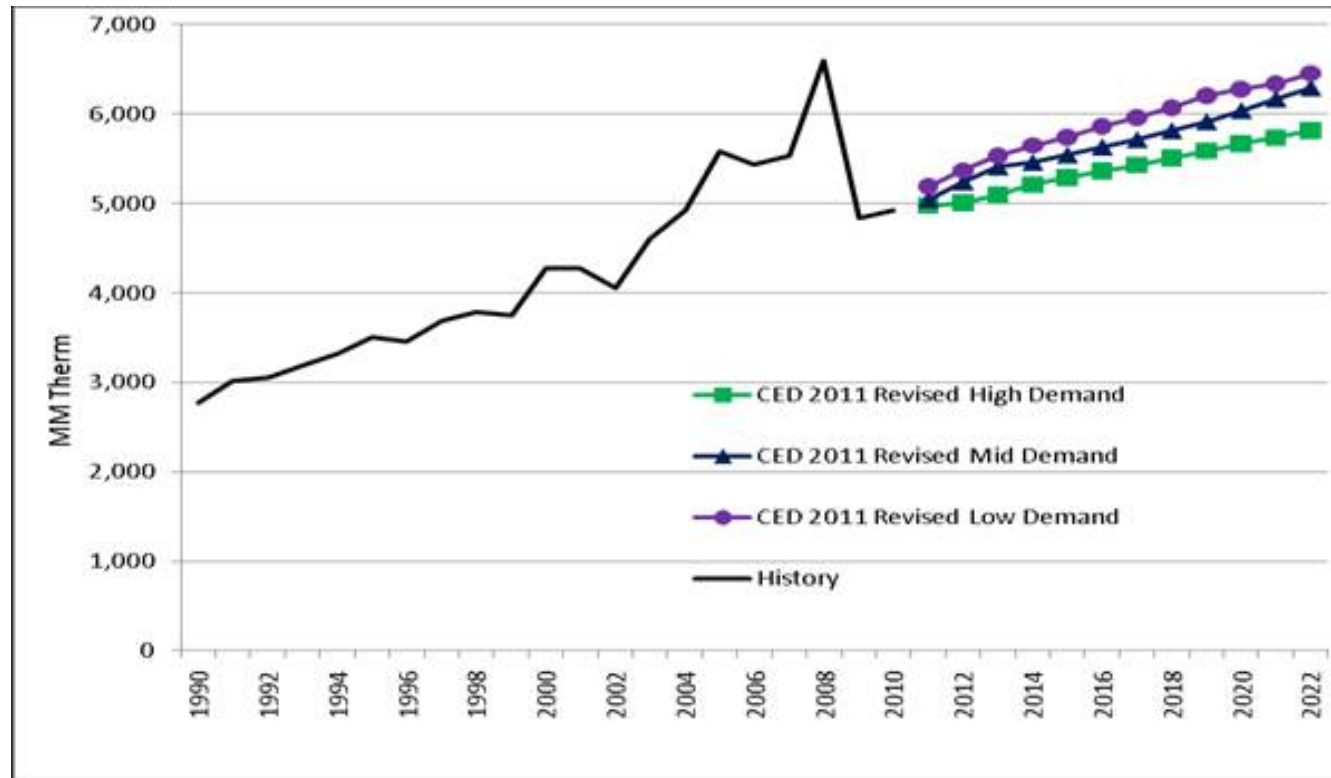
- CED 2011 Revised includes updated natural gas efficiency program impacts
- Mirrors the methodology used to incorporate electricity efficiency programs
- Savings estimates begin in 2006
- Program impacts supplement standards and rate considerations



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Statewide Committed Natural Gas Savings

Mid case above 6,200 MMTh by 2022





Efficiency Savings as a Percent of Consumption and Peak

Mid Case

	Electricity Consumption	Peak Demand	Natural Gas Consumption
1990	9.7%	10.1%	17.7%
2000	11.6%	12.6%	23.5%
2010	18.1%	19.0%	27.8%
2015	20.3%	21.6%	29.2%
2020	22.1%	23.4%	30.3%
2022	22.6%	23.9%	31.0%



Television Standards

- CED 2011 Revised includes impacts from television standards adopted in 2009
- Savings were estimated under the following assumptions:
 - Households average 2.5 televisions
 - Household usage averages 7 hours per day
 - Commercial usage averages 12 hours per day
 - No continuing market for cathode ray tube (CRT) televisions
 - Average screen size remains constant by technology
 - Existing stock of CRTs replaced first, then plasma and pre-standard LCD



Television Standards Impacts

	Residential		Commercial	
	Consumption (GWh)	Peak (MW)	Consumption (GWh)	Peak (MW)
2011	100	13	27	5
2013	446	58	106	21
2015	841	109	219	44
2020	1,814	236	467	93
2022	2,108	274	476	95